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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,942	10/21/2003	Glenn Edward Jones	2002B159/ 2	4029

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EXAMINER

SANDERS, KRIELLION ANTIONETTE

ART UNIT PAPER NUMBER

1714

DATE MAILED: 04/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/689,942	JONES ET AL.	
	Examiner	Art Unit	
	Kriellion A. Sanders	1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1, 2, 5, 7, 10-12, 14, 15, 16, 18-26 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Costemalle et al, US Patent No. 5631316.

Applicant's invention pertains to a composition comprising:

1. An elastomer comprising C4-C7 isoolefin derived units
2. A processing oil such as paraffinic, aromatic, naphthenic and polybutene processing oils
3. A material selected from:
 - i. A hydrocarbon resin grafted with a graft monomer such as maleic anhydride
 - ii. Oligomers having
 1. cyclopentadiene
 2. substituted cyclopentadiene

3. C5 monomers and/or C9 monomers

iii. Combinations of i and ii.

The composition may additionally comprise a filler, such as carbon black, silicates and clays.

The composition may additionally comprise a secondary rubber.

The composition may additionally comprise a sulfur, peroxide, metal oxide, metal oxide complex, fatty acid, and/or diamine curing agent.

Claims 21-22 are directed to compositions wherein the elastomer is cured.

Claims 23-24 pertain to articles made from the above compositions such as components for tires.

2. Claims 25-26 relate to a method for producing an elastomeric air barrier.

Costemalle et al discloses that butyl rubber compositions, (i.e., elastomeric copolymers of isobutylene with up to about 10 wt % of isoprene), possess excellent resistance to air permeability that render them suitable for use as tire inner tubes or innerliner materials. The innerliner is composed of a relatively thin sheet of the elastomer formulated with compounding additives and a curing system, which is laminated to the inner surface of a tire carcass layer of an uncured tire as the tire is formed on a tire building drum. Final cure of the composite structure produces a tire having a cured innerliner adhered to the carcass which serves as a barrier to the passage of compressed air through the tire.

These compositions comprise a mixture of:

(i) from about 40 to 80 weight percent of an elastomeric random interpolymer comprising at least about 80 wt % of a polymerized isomonoolefin containing from 4 to 7 carbon atoms and from about 0.05 up to about 20 wt % of copolymerized aromatic monomer. Most useful of such material are elastomeric copolymers of isobutylene and para-methylstyrene containing from

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about 0.5 to about 20 mole % para-methylstyrene wherein up to about 60 mole % of the methyl substituent groups present on the benzyl ring contain a bromine or chlorine atom, preferably a bromine atom.

ii) from about 20 to about 45 wt % of a filler,

iii) from 0 to about 25 wt % of a plasticizer oil; and

iv) at least 1 wt % of a curing system for said interpolymers. The rubber material may be formulated with a curative system such as zinc oxide and/or sulfur curing agents.

The quantity of peroxide generally ranges from about 1 to about 10% by weight, preferably from about 1.5 to 6% by weight per hundred parts by weight of curable polymer present in the composition.

Suitable filler materials include carbon black such as channel black, furnace black, thermal black, acetylene black, lamp black and the like. The filler may also include non-reinforcing materials such as silica, clay, calcium carbonate, talc, titanium dioxide and the like. The filler is normally present in the innerliner at a level of from about 20 to about 45% by weight of the total composition, more preferably from about 25 to 40% by weight.

Suitable plasticizer oils include aliphatic acid esters or hydrocarbon plasticizer oils such as paraffinic or naphthenic petroleum oils. The preferred plasticizer oil is a paraffinic petroleum oil. Suitable hydrocarbon plasticizer oils include oils having the following general characteristics.

ii) from about 20 to about 45 wt % of a filler,

iii) from 0 to about 25 wt % of a plasticizer oil; and

iv) at least 1 wt % of a curing system for said interpolymers.

The invention also provides a method of fabricating a pneumatic tire comprising forming the composition described above into an innerliner sheet material, exposing the sheet material to a source of high energy radiation sufficient to partially cure the sheet material, contacting the partially cured innerliner with a tire carcass element containing a more highly unsaturated rubber to form a laminate structure and heating the resulting structure at a temperature of about 100.degree. C. to 250 degree. C., for a period of time sufficient to vulcanize the structure.

Response to Arguments

1. Applicant's arguments filed 1/20/2006 have been fully considered but they are not persuasive. Applicant argues that Costemalle et al does not disclose the graft hydrocarbon resin or grafted oligomer required by every one of the present claims. This argument has not been found to be persuasive in that applicant's claims are not interpreted to require a graft polymer. Component C(ii) of the present claims may be an oligomer having units selected from the group of cyclopentadiene, substituted cyclopentadiene, C5 monomers, and/or C9 monomers, grafted with a graft monomer. This does not indicate that component C (ii) must be a graft polymer. Also see paragraph 0019 through 0021 of the specification wherein these components are further described.
2. Claims 1-5, 7, 10, 14-16, 18, 19, 23, 25 and 26 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Patel et al, US Patent No. 5621045.
3. Patel et al discloses compositions comprising semicrystalline polyolefins and blends of a crosslinked rubber. One rubber is composed of isomonoolefins and optionally conjugated dienes

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and alkylstyrene. The compositions are crosslinked with conventional crosslinking agents to form graft polymers. Processing oils fillers such as carbon black and conventional additives are also included in these compositions. The compositions are used to make automobile parts such as various covering materials. See col. 2, line 67 through col. 6, line 50 and col. 7, lines 52-57.

4. The rejection of claims 1- 26 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Wilson, III, US Patent No. 6620871 is withdrawn in view of applicant's remarks.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The rejection of claims 1, 2, 5, 7, 10-12, 14, 15, 16, 18-26 are are rejected under 35 U.S.C. 103(a) as being unpatentable over Costemalle et al, US Patent No. 5631316 as applied to claims 1, 2, 10-16 and 18-26 above and further in view of Theelen, US Patent No. 6372851 is withdrawn in view of applicant's arguments and remarks.

Claims 1, 2, 5, 7, 10-12, 14, 15, 16, 18-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson, III, US Patent No.6620871 as applied to claims 1, 2, 5, 7, 10-12, 14, 15, 16, 18-26 above and further in view of Teratani et al, US Patent No. 5001185.

7. Teratani et al discloses a rubber composition comprising 20-130 parts by weight of carbon black and 1-30 parts by weight of at least one resin obtained by adding amine as a curing

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agent for a resin modified with at least one of animal oil, vegetable oil, unsaturated oil, aromatic hydrocarbon and nitrile rubber for the provision of self curability, based on 100 parts by weight of at least one rubber selected from polyisoprene rubber (inclusive of natural rubber), polybutadiene rubber and styrene-butadiene copolymer rubber. According to the patented invention, additives usually used in rubber industry include sulfur, vulcanizing agent, vulcanization accelerator, antioxidant, silica and process oil. See col. 3, lines 19-24. Since these components are conventional their inclusion in the Wilson, III rubber compositions, particularly the specific oils of Teratani et al, would have been obvious to the ordinary practitioner of this art.

8. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate conventional process oils, fillers and curing agents into the compositions of Wilson, III as disclosed in the patent. This is supported by Teratani et al which documents the conventionality of such variations. Further use of the resulting elastomeric compositions to make traditional rubber articles such as tires and inner tubes would have also been obvious to the ordinary practitioner in the rubber art.

9. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the incorporation of conventional process oils, fillers and curing agents into

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the compositions of Wilson, III is suggested by Teratani et al which documents the conventionality of such additives.

Double Patenting

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-26 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-25 of copending Application No. 10690758.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the petroleum resins and oligomers of the application correspond to the graft polymers of the present claims.

11. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Information Disclosure Statement

12. Prior art cited of form 1449 must include a month and year of publication to be fully considered. The statement, "earlier than January 1, 2004" is not a publication date.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kriellion A. Sanders whose telephone number is 571-272-1122. The examiner can normally be reached on Monday through Thursday 6:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kriellion A. Sanders
Primary Examiner
Art Unit 1714